

IN THE CLAIMS

1. (Currently Amended): An imaging apparatus forming an image by performing scanning by deflecting a light beam, the imaging apparatus comprising:

an image input part configured to input image data obtained from scanning each scan line of an original image; and

a data conversion part that converts ~~multi-bit input image data into data specifying a pulse width or intensity of the light beam~~ a resolution of the image data input by said image input part,

wherein the said image data is input input part is configured to input, to said data conversion part, one scan line of the image data a plurality ~~given number~~ of times in succession; and

said data conversion part converts the resolution into a resolution different for each input scan line ~~performs a different data conversion for each of scanning lines of the given number based on the input image data.~~

2. (Original) The imaging apparatus as claimed in claim 1, wherein said data conversion part comprises a conversion table using a storage part.

3. (Original) The imaging apparatus as claimed in claim 2, further comprising a control part that sets any value for each of the scanning lines in said conversion table.

4. (Currently Amended) A multi-beam imaging apparatus forming an image by performing scanning by ~~simultaneously~~ deflecting a plurality of light beams, the multi-beam imaging apparatus comprising:

an image input part configured to input image data obtained from scanning each scan line of an original image; and

a plurality of data conversion parts configured to convert, for each of the plurality of light beams, a resolution of the image data input by said image input part, provided individually for the corresponding light beams, the data conversion parts determining pulse widths or intensities of the corresponding light beams based on input multi-bit image data and performing different data conversions from each other

wherein said plurality of data conversion parts are configured to perform different conversion operations.

5. (Original) The multi-beam imaging apparatus as claimed in claim 4, wherein each of the data conversion parts includes a data conversion table using a storage part.

6. (Original) The multi-beam imaging apparatus as claimed in claim 5, further comprising a control part that sets any independent value in each of said conversion tables for the corresponding light beam.

7. (Original) The multi-beam imaging apparatus as claimed in claim 4, wherein said data conversion parts comprise a part that converts the input multi-level image data into modulation code data so that the light beams are output differently from each other based on the modulation code data.

8. (Original) The multi-beam imaging apparatus as claimed in claim 4, wherein each of said data conversion parts includes a register to which rewritable pulse-width data and a

rewritable phase code are input and a selector that selects a given one of written contents of the register based on the input multi-level image data.

9. (Original) The multi-beam imaging apparatus as claimed in claim 8, wherein the rewritable pulse-width data and phase code are matched in advance with a characteristic of the multi-beam imaging apparatus.

10-13 (Canceled).

14. (Currently Amended) An imaging apparatus forming an image by performing scanning by deflecting a light beam, the imaging apparatus comprising:

means for inputting image data obtained from scanning each scan line of an original image; and

data conversion means for converting a resolution of the image data input by said
means for inputting multi-bit input image data into data specifying a pulse width or intensity
of the light beam,

wherein said means for inputting inputs, the image data is input to said data conversion means, one scan line of image data a plurality given number of times in succession; and

said data conversion means converts the resolution into a resolution different for each
input scanning line performs a different data conversion for each of scanning lines of the
given number based on the input image data.

15. (Original) The imaging apparatus as claimed in claim 14, wherein said data conversion means comprises a conversion table using storage means.

16. (Original) The imaging apparatus as claimed in claim 15, further comprising control means for setting any value for each of the scanning lines in said conversion table.

17. (Currently Amended) A multi-beam imaging apparatus forming an image by performing scanning by ~~simultaneously~~ deflecting a plurality of light beams, the multi-beam imaging apparatus comprising:

means for inputting image data obtained from scanning each scan line of an original image; and

a plurality of data conversion means for converting, for each of the plurality of light beams, a resolution of the image data input by the means for inputting, provided individually
~~for the corresponding light beams, the data conversion means determining pulse widths or intensities of the corresponding light beams based on input multi-bit image data and performing different data conversions from each other~~

wherein said plurality of data conversion means perform different conversion operations.

18. (Original) The multi-beam imaging apparatus as claimed in claim 17, wherein each of the data conversion means includes a data conversion table using storage means.

19. (Original) The multi-beam imaging apparatus as claimed in claim 18, further comprising control means that sets any independent value in each of said conversion tables for the corresponding light beam.

20. (Original) The multi-beam imaging apparatus as claimed in claim 17, wherein said data conversion means comprise means for converting the input multi-level image data into modulation code data so that the light beams are output differently from each other based on the modulation code data.

21. (Original) The multi-beam imaging apparatus as claimed in claim 17, wherein each of said data conversion means includes a register to which rewritable pulse-width data and a rewritable phase code are input and a selector that selects a given one of written contents of the register based on the input multi-level image data.

22. (Original) The multi-beam imaging apparatus as claimed in claim 21, wherein the rewritable pulse-width data and phase code are matched in advance with a characteristic of the multi-beam imaging apparatus.

23. (New) The image forming apparatus of claim 1, wherein said data conversion part is configured to convert the resolution of the image data input by said image input part to be a higher resolution.

24. (New) The apparatus of claim 4, wherein said data conversion part is configured to convert the resolution of the image data input by said image input part to be a higher resolution.

25. (New) A method of forming an image by performing scanning by deflecting a light beam, comprising:

inputting image data obtained by scanning each scan line of an original image;

converting a resolution of the input image data by converting each scan line a plurality of times,

wherein the converting step converts the resolution of the input image data into a different resolution for each input scan line.

26. (New) The method of claim 25, wherein the converting step comprises converting the resolution of the image data to be a higher resolution.